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THE MONIST

TRUTH.

THE WORD "TRUTH" IN EUROPEAN LANGUAGES.

THE words true, truth, troth, trust, truster, trustee, truce, etc., are derived from an old Teutonic root which appears also in the modern German words treu, "faithful," trauen, "to have confidence," and also Trost, which means originally "rest" or "assurance," then "reliance," and finally "comfort" or "solace."

The noun truth is formed from true by the ending th in the same way as wealth from weal (prosperity), health from hale (sound), dearth from dear (scarce), and hearth from a word now lost corresponding to the Gothic hauri and Icelandic hyrr meaning "coal," a "cinder" or "ember."

By "truth" we generally understand the trustworthiness or reliability of an idea. According to the etymology of the word, truth is that which endures, that which continues to remain the same, that which stands the test and is not subject to change.

The German words wahr and Wahrheit are most probably derived from the root was, the infinitive of which in Old German is wesen, "to be," "to exist." Derivatives of this root are preserved in the English "was" and "were." The German word wahr must originally have denoted ac-

tual existence, and then acquired the meaning "true" in the sense that what we think is, actually exists.

The English word "worth" as well as its German equivalent *Wert* are probably connected with the same root from which *wahr*, "true," is derived. It means originally the quality of having substance or reality, that which is *wahr* or truly being; that which is reliable, because it endures.

The German word wahr has no direct connection with the Latin verus; at any rate it is not derived from it, for it existed among the Saxons as well as the Germans and other Germanic nations before Roman civilization began to influence northern Europe; but it is not impossible that verus is derived from the same root, was, which is common to all the Indo-Germanic nations.

In Anglo-Saxon, the word war, "true," meant the same as the German wahr, but it was replaced in English by "true," the German treu, meaning faithful. Judging from the Gothic word tuzwers, "doubtful," the Goths must also have had the root of the German wahr; it was presumably pronounced wers, but at the time of Ulfila the term sunjis ("true," the root of which is sa or as, as it appears, for instance, in the German sein and in asmi, $\epsilon i \mu i$, sum and am) was used in its stead.

If we attempt to reproduce the Gothic *sunjis* in modern German, we might render it *seinig*, analogous to an English formation, *be-ish*.

The German affirmation ja, "yes," and its English equivalent yea mean "it is true" and are derived from a root which appears in the Old-High-German verb $j\bar{e}han$, "to own, to confess, to profess." In Old-Saxon it reads ja and in Anglo-Saxon $ge\hat{a}$ or $ge^2-sw\hat{a}$, the latter being an amplification meaning "yea thus" or "yea so," and was contracted into ge^3 , from which the modern word yes is derived.

The root of *jēhan* appears also in the German word Beichte, "confession," which is derived from the verb be-jēhan, or later be-ichten.

How far ja is connected with je (Old-High-German ie) is doubtful.

The word ie or iwe (English ever) is preserved in the German je and ewig, "eternal." The same root has produced the German Ehe, "marriage," denoting the alliance between husband and wife destined to last forever. In Greek the word $\alpha \tilde{\iota} \omega \nu$, an unlimited long period, is etymologically the same as the German Ehe. The h in Ehe corresponds to a digamma (pronounced v) in the old Greek aivon as well as the German ewig, but it disappears in the Attic pronunciation of the Greek $\alpha \tilde{\iota} \omega \nu$, as well as in its English derivative "eon."

The German wahren, "to guard" and währen (the latter etymologically the same as the English "wear" in the sense "to last," "to endure") are also kin to wahr, but here the idea of existence has been changed to that of persistence.

How far, and whether at all, the old Slovenian word vera, "faith," and the Irish fir, "truth," are etymologically related to the Teutonic word war, "true," or the root was, "real," is doubtful.

In Greek the word $\partial \lambda \dot{\eta} \theta \epsilon \iota a$ means that which is not hidden, that which can be beheld unconcealed, that which is not masked, or does not put on a false show.

In the Slavic languages truth is called *pravda* (in Polish spelled *prawda*) and in Croatia it is called *istina*.

The Hungarian word for truth is *igaz*, and from this same root are derived a number of other words, such as *igazsag*, literally "truthhood," denoting "justice," *igeret*, "promise," and *igen*, "yes" or "yea."

In addition there exists a special word *ige* which means truth in a religious sense and denotes especially the scrip-

tures, or the Bible, or the word of God. Since Hungarian is a non-European language, the roots of which are different from any Aryan speech, it is difficult to trace the original meaning of these words, but the several derivatives prove that the original meaning can not be much different from their English equivalents, true, truth, troth, and yea or yes, "it is true," as an affirmation.

THE HEBREW, THE EGYPTIAN AND THE CHINESE NOTIONS OF TRUTH.

In Hebrew there are several words denoting truth, but all of them denote what will last or will stand inquiry. The words 'omen as well as emeth are derived from verbal stems which mean "to be firm." The former verb aman has entered into the New Testament and thence into all modern languages in the shape of Amen, "verily," which literally means "it stands firm," or "it is true."

Netsakh² means originally glory, brightness, then lastingness and truth, while the affirmation yetseb is used to denote that which will stand in court, being derived from yatzab.³

The Chaldee word *Qeshot*,⁴ "truth," is derived from *Qashat*, "to divide evenly," "to make equal," "to measure off rightly," and is connected with words meaning a pair of balances and weights. The underlying idea of the conception is the determination of exact measure.

* * *

In Egyptian truth is called *Ma'at*, represented as a goddess with an ostrich feather, a figure which is different from all other gods in so far as she plays no part in mythology, except that she is called the daughter of Ra, the Sun-

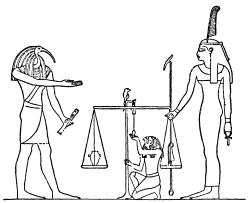
¹ The word אָמֶן is derived from אמת, ''to be firm,'' and אַמֶּר, ''to be stable."

² Two forms, 지말 and 지말, are in use, both being derived from 지말.

א בצב from ארי, "to stand in court."

לשוט 4 truth, and קשיטה, weight, are both derived from לשוט 4.

god, and is commissioned with weighing the heart of the soul in the underworld before the throne of Osiris. Otherwise she is the personification of truth and right, but the



HORUS WEIGHING THE HEART IN THE UNDERWORLD.*



ANCIENT BREASTPLATE REFERRED TO IN TEXT.



A GOVERNOR OF RAMESES IX. From Erman, Life in Ancient Egypt.



THE GODDESS MAAT. From Budge's Mummy, p. 29.

abstract idea of the term has been and has always remained uppermost in the minds of the Egyptian people. She is

^{*}In the scale is the hieroglyphic for truth.

also spoken of in the dual form *ma'ati*, "the two truths," as the goddess who attends to both punishments and rewards.

The goddess Ma'at is repeatedly mentioned in the oldest extant Egyptian inscription which praises King Unas because "he loved truth (maa)... and the double truth (maati) has heard him...the double truth has given command to let him pass through the realm of Seb, and to make him rise at his pleasure....And Unas cometh forth on this day as the fruit of the truth (maa) of a living soul ... Unas cometh forth according to the truth, which brings him his desire."

The adjective *maa* means "straight" or "level," then "right" or "due," and also "genuine" or "real."

The emblem of Ma'at is the ostrich feather. As a goddess Ma'at is the patron of justice, and it is reported that the chief judge wore her picture on a chain upon his breast. The breastplate here reproduced shows Ma'at and the hawkheaded Ra, seated on either side of an obelisk. The picture of a governor under Rameses IX shows him in his capacity as a judge, holding the ostrich feather of truth in his left hand.

* * *

The Chinese word for "truth" is \mathbf{E} chan, which is a compound of the two characters \mathbf{L} jan, "man," and \mathbf{E} chih, "upright." The character jan appears in the two strokes underneath the word chan. The word "upright" is a compound of three radicals, which are \mathbf{L} shih, "ten," \mathbf{E} "eye," and \mathbf{L} an abbreviation of \mathbf{E} yin, which means "hidden." The whole compound character is explained in the Chinese dictionaries as "ten eyes see the hidden." The word "ten" also means "perfect" or "complete," and so it might as well mean, "a perfect vision of the hidden."

⁸ The character chan, "truth," is found in Chinese dictionaries under the radical No. 109, meaning "eye," as accompanied by five strokes.

As the character *chan*, "truth," now reads, the radical *shih*, "ten," on top of the old way of writing *chan*, is replaced by the radical No. 21, **E** pi, "ladle," in the sense "to compare" or "to change," and in this form the word is explained according to the Taoist notion as referring to the changes which spiritual beings or fairies undergo. In explanation of this view we must state that under the influence of mysticism the "true man" has come to denote first a purely spiritual person, then a magician who can change his shape at will.

The adjective "truthful" in Chinese is 信 sin, and the character consists of Λ "man" (in compounds on the left side written thus Λ), and the word Ξ yen, the latter being composed of Π "mouth" and four strokes above it, meaning "what comes out of the mouth." The whole character "truthful" accordingly depicts "a man standing by his word," a pictorial description than which certainly no better could be invented.

A DESCRIPTION OF THE NATURE OF TRUTH.

Before we enter into further explanations of the significance of truth we will hear what philosophers have said about it, how they define it and what they think about it.

But since many of their statements are vague and unclear, it will render a review of their definitions easier if we know the state of things which suggested the coinage of the word. It is advisable for this reason that we understand exactly why and how the word originated and what we ourselves mean by truth. If we are clear ourselves we shall the quicker see what our predecessors intended to say even when they missed the point or could not find the right expression.

The need of communicating our intentions, our requests and our ideas concerning things has produced language; but incidentally while this purpose is fulfilled, lan-

guage accomplishes a task which grows in importance; it clarifies the mind, it begets abstract ideas and thereby produces that order in the methods of thought which is called reason. The speaking animal becomes a rational being.

All speech is representative. Every word stands for something, and every sentence either is itself a declaration or implies one. Every statement refers to some object of thought which may be anything or of any kind and need not be a bodily and concrete object. It may be a mere relation and even, as in mathematics, a purely mental conception, or the product of a mental function.

A declaration may describe its object of thought correctly or incorrectly, appropriately or inappropriately, with exactness or inadequately. In the former case it is called true; in the latter false, erroneous, untrue or incomplete.

When we ask what truth means, we must first bear in mind that truth always refers to a statement made concerning some fact. If the statement describes the fact as it is, it is called "true." We do not speak of facts as being true; facts are either "real" or "unreal." The existence of the chair, the table, the pen is not called "true," but the statement that the chair on which I sit, or the table on which I write, has four legs, is either "true" or "untrue." A statement, as a rule, can be verified. We can count the legs of the table, and if we count to four we say, "It is true that the table has four legs."

Truth accordingly consists in a relation. There is a subjective statement and an objective condition of things. Truth means that the former properly describes or represents the latter. If I investigate and find my expectations fulfilled, I call the statement true, and this correspondence, this congruence of thought and thing, is called truth.

THE PHILOSOPHERS OF CLASSICAL ANTIQUITY.

A review of philosophical definitions of truth must naturally be very incomplete, because not every philosopher has left a succinct exposition of the subject, and what we have to offer here is practically a mere compilation of extracts made from the history of philosophy, having no other merit than that they furnish a brief synopsis of various views and explanations.

We will introduce our collection with a quotation from the literature of the Old Testament Apocrypha, which is not a definition but an appreciation of truth. It is not philosophical but religious and reflects in general and emotional language the reverence in which truth is held by mankind. We read in I Esdras, iv. 38-40:

"As for the truth, it endureth, and is always strong; it liveth and conquereth for evermore.

"With her there is no accepting of persons or rewards; but she doeth the things that are just, and refraineth from all unjust and wicked things; and all men do well like of her works.

"Neither in her judgment is any unrighteousness; and she is the strength, kingdom, power, and majesty of all ages. Blessed be the God of truth."

By turning from the Jewish literature to Greek philosophy we must regret the absence of any definition of truth among the oldest thinkers, since, with the exception of a few extracts, quotations and general characterizations, their writings have been lost.

The oldest Greek philosopher whose definition of truth has been preserved is Parmenides of Elea. He was born about 515 B. C., flourished in the beginning of the fifth century and must have been advanced in years in the time of Socrates. He was the philosopher of pure being to whom reality appeared as merely phenomenal, and ac-

⁶ In the place of "rewards," the word "privileges" would perhaps better convey the meaning of the text.

cording to him truth consists in the knowledge that being is and not-being cannot be. The error accordingly arises through the belief that not-being exists. This view of Parmenides is preserved in a passage repeatedly quoted. which according to Proclus in his commentary on Plato's Timaeus (II, 105 b) reads thus:⁷

"Listen and I will instruct thee—and thou, when thou hearest, shalt ponder,

One path is: That Being doth be, and Non-Being is not;

Being."

This is the way of conviction, for Truth follows hard in her footsteps.

The other path is: That Being is not, and Non-Being must be; This one, I tell thee in truth, is an all-incredible pathway. For thou never canst know what is not (for none can conceive it) Nor canst thou give it expression, for one thing are Thinking and

We must remember that Parmenides identified pure existence with the absolute conception of pure being, thus identifying existence with pure thought. Plotinus quotes from him, "For one thing are thinking and being," which is thought to belong at the end of the passage just quoted, and has therefore been included with it.

Plato was greatly influenced by Parmenides and reconciled his views with the philosophy of Heraclitus, whose system is characterized by the phrase $\pi \acute{a}\nu\tau a \ \acute{\rho}e\hat{\iota}$, "Everything is in a flux." Plato's view of truth is condensed by Ueberweg as follows:

⁷ The passage as quoted here is translated from Mullach's Fragmenta Philosophorum Graecorum by Thomas Davidson in the Journal of Speculative Philosophy, Vol. IV, No. 1 (January, 1870).

⁸ History of Philosophy, New York, Scribners, 1903, I, 125.

knowledge of truth ($\partial \lambda \hat{\eta}\theta\epsilon\iota a$), but those of belief ($\pi i\sigma\tau\iota s$). Plato says (Tim., p. 29 c): "What being is to becoming, that is truth to faith" ($\delta \tau\iota \pi\epsilon\rho \pi\rho\delta s \gamma\epsilon\nu\epsilon\sigma\iota\nu o\nu\delta\iota a$, $\tau o\nu\tau o \pi\rho\delta s \pi\iota\sigma\tau\iota\nu d\lambda \hat{\eta}\theta\epsilon\iota a$). What Plato says in the *Phaedo*, p. 114 d, explains his idea of the probable: Firmly to assert that this is exactly as I have expressed it, befits not a man of intelligence; yet that it is either so or something like it ($\delta\tau\iota \hat{\eta} \tau a\nu\tau' \hat{\epsilon}\sigma\tau\iota\nu \hat{\eta} \tau o\iota a\nu\tau' \hat{\sigma}\tau\tau a$) must certainly be assumed."

Aristotle's definition of truth commends itself more than Plato's to the scientist, and has been summed up by Ueberweg thus (op. cit., I, 152):

"Truth in a logical judgment is the correspondence of the combination of mental representations with a combination of things, or (in the case of the negative judgment) the correspondence of a separation of representations in the mind with a separation of things; falsity in judgments is the variation of the ideal combination or separation from the real relation of the things to which the judgments relate."

Further down Ueberweg says concerning Aristotle:

"Truth in knowledge is the agreement of knowledge with reality (Categ., c. 12: $τ\tilde{\varphi}$ γὰρ εἶναι τὸ πρᾶγμα ἢ μὴ ἀληθὴς ὁ λόγος ἢ ψευδὴς λέγεται). This dictum is thus particularized, in Met., IV, 7, with reference to the various possible cases: 'Affirming non-existence of the existent, or existence of the non-existent, is falsehood; but affirming existence of the existent, and non-existence of the non-existent, is truth.'"

The Stoics have devoted themselves to explaining the method by which truth becomes known, or, as we would now say, they lay much stress on epistemology or the theory of cognition, better expressed by the Saxon formation "kenlore." According to them all knowledge arises from sense perception, and the fundamental criterion of truth is found in the distinctness with which sense perceptions are represented in the mind.

Epicurus, though very different from the Stoics in his ethics, agrees closely with their theory of cognition. His

criteria of truth are sensation and feeling. To him all sensations are true and indisputable.

Here Epicurus ought to have said that sensations are the ultimate data from which we derive our knowledge, but a sensation cannot properly be called true. It is simply a fact.

That Epicurus confused truth and reality appears from his contention that no perception can be proved false (he means unreal) and that even dreams and the hallucinations of the insane are true, because they produce an impression which the non-existent could not do.

The images of past sensations are remembered, and Epicurus calls them representations. Beliefs are called true or false in so far as they are confirmed or refuted by sensations. It is noteworthy that Epicurus disregarded the value of logical syllogism because according to his view no syllogism could supply the place of direct sensation. It is interesting to note that this view is paralleled in India by the materialist school, the Charvakas or Lokayatas, who also deny that logical argument can carry conviction because they claim that the only source of information is sense-perception.

CHRISTIANITY AND THE DOCTRINE OF TWO TRUTHS.

Augustine understands by truth the norm according to which reason argues, and he declares that it must be unchangeable (*De lib. arb.*, II, 3). To reach the unchangeable is to him the attainment of truth. He says (*De vera rel.*, 72 f):

"If thou findest thy nature to be changeable, rise above thyself to the eternal source of the light of reason. Even if thou only knowest that thou doubtest, thou knowest what is true; but nothing is true unless truth exists. Hence it is impossible to doubt the existence of the truth itself."

Truth and existence are the same according to St.

Augustine, and he identifies them with God (De vera rel., 57; De trin., VIII, 3). This ultimate truth is the highest good in virtue of which all other blessings are good (De trin., VIII, 4). Created things stand in a contrast to the unchangeable highest good and thus indirectly the mutability of created things reminds us of the immutability of truth.

Thomas Aquinas defines truth as adaequatio intellectus et rei, which is best translated as "agreement of thought and thing."

During the Middle Ages the church claimed the authority of a special divine revelation as the source of truth, its truth, the truth of ecclesiastical dogmas.

In Spain where in a Mohammedan country a high civilization had developed we find a distinction made between esoteric and exoteric truth. Revealed religion was the truth made palatable to the masses, it was exoteric, while esoteric truth was the special privilege of the thinker, and it was not deemed necessary for the two to agree. In a similar way and not without the influence of Averroës and Maimonides the conflict between scientific truth and religious truth led to the theory of the two truths, theological and philosophical, and it was assumed that what is true in theology need not be true in philosophy and vice versa. Prof. M. Maywald has made a special study of this strange aberration in his book Die Lehre von der zweifachen Wahrheit, Berlin, 1871, and Windelband condenses this subject in his *History of Philosophy* (pp. 320-321) as follows:

"If, by theology, we understand the exposition of the positive doctrine of religion, arranged and defended according to the formal laws of science, i. e., Aristotelian logic,—and this was the form which the relation of theology to religion had taken in the West as in the East,—it follows that something may be true theologically which is not true philosophically, and *vice versa*. Thus is explained

that doctrine of the twofold truth, theological and philosophical, which went through the entire Middle Ages, although we cannot exactly fix the authorship of this formula. It is the adequate expression of the mental state necessarily brought about by the opposition of the two authorities under which the Middle Ages stood, viz., Hellenistic science and religious tradition; and while at a later time it often served to protect scientific theories from the persecution of the church, it was for the most part, even in these cases, the honest expression of the inner discord in which just the most important minds of the age found themselves.

"The science of the Christian peoples accepted this antithesis, and while the doctrine of the twofold truth was expressly proclaimed by bold dialecticians such as Simon of Tournay, or John of Brescia, and was all the more rigidly condemned by the power of the church, the leading minds could not evade the fact that philosophy, as it had been developed under the influence of Aristotle and the Arabians, was, and must remain, in its inner nature, alien to precisely those doctrines of the Christian religion which were specific and distinctive."

The doctrine of the twofold truth found its most energetic champion in the French savant Pierre Bayle. Albertus Magnus had distinguished between natural and revealed religion, but he clung to the idea that there might be no contradiction between the two. He tried to show that what science and philosophy teach holds good also in theology, but that certain realms inaccessible to natural insight (lumen naturale) could be entered only through the mysteries of revelation. Pierre Bayle, however, went so far as to declare that all doctrines of the church were positively contrary to reason, indeed that they were absurd from the standpoint of science. He thus exemplified the sentence credo quia absurdum. But the doctrine of the double truth proved a two-edged sword and in the long run served more to weaken than to establish confidence in the traditional religious belief.

The church itself with its usual instinctive foresight would not brook the doctrines of the twofold truth, and the

Lateran Council of 1512 condemned this distinction and pronounced everything false which stood in contradiction to revelation.

MODERN THINKERS.

Spinoza inserts his definition of truth among the axioms, in the sixth of which he states that "the true representation must agree with the object represented."

Hume is a skeptic and so has little to say about truth except that all positive attempts at stating truth are futile.

Kant, who was awakened from his dogmatic slumber by Hume's skepticism, so changed his attitude toward the data of knowledge that instead of a conception of truth he presents in his *Critique of Pure Reason* an inventory of our faculty of working out sense experience into scientific knowledge. He calls his system "critical idealism" and says that since things-in-themselves are unknowable, human knowledge is limited to phenomena. Thus it happens that reason is practically our norm of knowledge; but it may not be accidental that he has nowhere discussed the problem of truth. It is as if this problem had lost its usual significance in his philosophy, and so we find that the very caption of truth is not listed in Gustav Wegener's *Kant-Lexikon*.

Schopenhauer adopts Kant's idealism, but he repeatedly discusses the nature of truth and insists most emphatically on its consistency, saying that truth alone agrees throughout with itself and with nature while all wrong views clash internally with themselves and externally with experience. In fact experience protests step by step against errors. One truth can never upset another, but all must ultimately agree because no contradiction is possible in intuition (Anschauung) which is their common foundation. Thus no

^oCf. Grundprobe der Ethik, 258, and Welt als Wille und Vorstellung, II, 114.

truth can be in fear of another. Fraud and error, however, must stand in awe of every truth. All truths form one system. They postulate and complement one another while error collides everywhere. Schopenhauer distinguishes between general truths and special truths, and of these he rates general truths the higher, as gold is more valuable than silver. Gold can always be easily changed into small coin. 11

Schopenhauer distinguishes between correct, true, real and evident, saying that concepts are correct, judgments are true, material things are real, and interrelations such as mathematical figures are evident. When he speaks of the foundation of truth as being based on intuition (Anschauung) he means such knowledge as is contained in geometrical and arithmetical theorems, which in Kant's terminology is called a priori and according to Schopenhauer is based on Anschauung or intuition whose truth appears or becomes evident by merely contemplating the interrelations of geometrical figures.

There are four kinds of truth according to Schopenhauer. One is purely formal or logical, referring to syllogisms and correctness of deductions; the second is empirical, referring to statements of fact; the third is transcendental where the word is used in the sense of Kant's terminology. It comprises judgments of pure mathematical and pure natural science (referring mainly to the law of causation). The fourth kind of truth is metalogical, referring to the conditions of thinking itself.

Schopenhauer's philosophy, as is well known, insists on the dominance of the will. The intellect, though really the priestess of truth, is misused by the will as his handmaid, for the will in Schopenhauer's system plays the part of the devil. But some of his successors, especially Nietz-

¹⁰ Panerga und Paralipomena, II, 253, and I, 136.

¹¹ P. u. P., II, 22.

sche, accept upon the whole the foundation of Schopenhauer's world-conception, but they deify the will and claim that the intellect ought to be secondary. Nietzsche goes so far as to deny the right of truth to exist except by the gracious permission of the will, and this same tendency to give preeminence to the will has invaded other circles, as we have seen, and has found definite expression in pragmatism. The great question remains whether or not truth is possible at all, and with this question ethics stands and falls as well as science, for if there is no standard of truth neither can there be a standard of right and wrong.

The average opinion as to the nature and function of truth among modern scientists is characterized by John Theodore Merz, who speaks as follows in his *History of European Thought in the Nineteenth Century*: 12

"At one time—and that not very long ago—the word truth seemed to indicate to the seeker not only the right method and road for attaining knowledge, but also the end, the crown of knowledge. 'Truth, and nothing but truth,' seems still to the popular mind the right maxim for seeking knowledge—the whole truth stands before it as the unity of all knowledge, were it found. I think it is now sufficiently clear to the scientific inquirer, as well as to the philosopher, that love of truth, while it does indeed denote the moral attitude of the inquiring mind, is insufficient to define either the path or the end of knowledge. 'What is truth?' is still the unsolved question. The criteria of truth are still unsettled. It would, indeed, be a sorrowful experience, a calamity of unparalleled magnitude, if ever the moral ideas of truth and faith should disappear out of the soul of either the active worker or the inquiring thinker; but it is with these as with other treasures of our moral nature, such as goodness and holiness, beauty and poetry—our knowledge of them does not begin, nor does it increase, by definition; and though in the unthinking years of our childhood we acquire and appropriate these moral possessions through the words of our mother-tongue, they rarely gain in depth or meaning by logical distinctions which we may learn, or to which we have to submit, in later life. These do

¹² English translation, p. 29 f.

not touch the essence, though very frequently they may succeed in destroying the depth, of our convictions.

"In the place, then, of the high-sounding but indefinable search after truth, modern science has put an elaborate method of inquiry: this method has to be learned by patient practice, and not by listening to a description of it. It is laid down in the works of those modern heroes of science, from Galileo and Newton onward, who have practised it successfully, and from whose writings philosophers from Bacon to Comte and Mill have—not without misunderstanding and error—tried to extract the *rationale*."

While knowing that this is the average opinion of our scientists we must enter a vigorous protest against the proposition that "the criteria of truth are still unsettled." It is true enough that "the scientific method has to be learned by patient practice, not by listening to a description of it," but that what has been successfully practised by the heroes of science from Galileo down to Lord Kelvin, Hertz and their most recent successors, should be equivocal and doubtful is not true. The methods of an investigation of truth are not vague nor indefinite. Our scientists rely on observations unequivocal and reliable, which are made by mechanical contrivances, registry machines, instruments of precision, with photography and chemical reactions, according to circumstances. We always have a combination of sense perception, which at present is rendered more reliable by the invention of various devices, the machinery of the scientist, with the calculation of arithmetic, mathematical construction or logical argumentation. In brief, the scientific method is, as cognition has always been since the beginning of the human race, sense experience treated by the rules of reason (the purely formal sciences). Sense experience furnishes the fact in question, reason (that is, the sum total of all purely formal modes of reasoning) furnishes the method of treating the facts, of classifying and systematizing them.

TRUTH AND MIND.

There is an unmistakable agreement among most of these different opinions as to the nature of truth. It seems that all philosophers of the world bear in mind a certain ideal and are guided by the same tendency only with more or less lucidity and with more or less depth. It is plain that truth is a relation, and it always denotes an agreement between thought as stated in a formula and the object of thought, whatever the latter may be. If this object of thought be called "thing" we can accept unhesitatingly the definition of Thomas Aquinas that truth is the agreement between thought and thing (adaequatio intellectus et rei); in fact this is the simplest definition, but it needs further explanation as to the nature of both thought and thing.

Truth is in thought and in thought only. There is no truth elsewhere. What is sometimes called truth ought to be called reality or existence, actuality, fact or whatever else we may call the objective meaning of a thought. There is a great difference between existence and truth. Facts (by which we mean concrete things, events or conditions that obtain independent of what anyone may think of them) are real, while truths are correct images, symbols, descriptions, or representations of such facts. The sense impressions of which a sentient being becomes conscious are not truths but facts. They are the data from which we construct our knowledge of the objective world. These sense impressions are the results of impacts made by the surrounding world upon a sentient being. Sense impressions are states of awareness which come to indicate the presence of the causes producing them, and thus these sense impressions acquire meaning, or, as we might say, are worked out into sense perceptions. The external impacts are physical facts—ether waves that strike the eye, air

waves that strike the ear, mechanical impressions that affect the skin, etc. Sense impressions are psychical, they are states of feelings, and sense perceptions are mental.

As soon as a sense perception begins to stand for its external cause and is interpreted to picture, delineate or characterize an outside fact, we have to deal with mind, and mind is the domain of truth. While a sense impression is a fact, a sense perception may be true or false.

Sense impressions work with the infallibility of natural laws, and they are nature's work over which we have no control; but sense perceptions are our own doing. They are the result of a reaction which takes place in us in response to a number of sense impressions. Every sense perception, even in its simplest form, is an unconscious judgment. It presupposes that a sense impression of the same kind has been received and has left a trace in the sentient substance. If then a new sense impression of the same kind is made, it fits into the path left by the trace of the former sense impression and revives it. Thus we have two feelings, that of the new sense impression and the revived memory of the former sense impression, but in addition there originates another and a new feeling by the fusion of the two which is the perception of the two being of the same kind. The analogy to a logical syllogism is The memory of the preceding impression represents the major premise, under which the new sense impression is subsumed as the minor premise, and the feeling that the impression fits is tantamount to the conclusion that the subjects of the premises belong to the same category.

So far as prior and subsequent sense impressions tally correctly, they are appropriately called true, and the truth consists in the correct subsumption of what belongs in the same class. Thus truth in its simplest shape is the fitting of a certain form of feeling in its proper place, or by impli-

cation the correctness of the unconscious judgment that the new sense impression is the same in kind as the preceding one and indicates the presence of the same cause.

Truth and mind are twins, and truth is co-existent with mind. When sense impressions acquire meaning, when they develop into perceptions, mind originates and the origin of mind denotes the birth of truth, and also of the possibility of error.

SENSE PERCEPTIONS AND HALLUCINATIONS.

The formation of sense perceptions is the beginning of mind, but by the side of sense perceptions there are hallucinations. Does not their mere existence obviously invalidate the character of sense perceptions, especially their reliability, and does it not thereby throw suspicion upon truth?

We grant the occurrence of hallucinations, but their prevalence no more invalidates the reliability of sense perceptions than the prevalence of error invalidates or renders doubtful the character of truth. We must only bear in mind that with the appearance of truth there necessarily rises the possibility of error, and this happens at the very beginning of the origin of mind. In other words, as soon as sense impressions change into sense-perceptions there appears the possibility of mistakes. If a sense impression receives a wrong interpretation it is called an hallucination. Here is an instance.

The eye of a sentient being gazes fixedly at a red figure on a white sheet of paper and this red spot on the retina is rightly conceived and interpreted by the resulting sense perception. Now the paper is withdrawn, but the image persists, except that in place of the red figure a blue spot of the same outline appears in view, and this seems almost as tangible and real as was the red figure. We call it the after-image of the red figure, and its nature is sufficiently explained in the physiology of optics. This afterimage is as truly a sensation and it is as real as is the original sense impression, and if we interpret it rightly to be an after-image we cannot speak of it as an hallucination. But suppose the eye were part of the organism of an unsophisticated person who knows nothing about sense illusions, the after-image would naturally be interpreted to indicate the presence of a blue figure, and this wrong interpretation would be called an hallucination.

Hallucinations accordingly are sensations produced by internal causes which are wrongly interpreted to be of external origin. There may be hallucinations of all the senses—even tactual and gustatory, but the auditory hallucinations caused by some internal disturbance of the ear and also of the center of hearing are the most common. Next to them in frequency are visions which are the hallucinations of the sense of sight, frequently caused by disturbances in the eye, specks in the circulating fluids of the outer eye or on the retina, but they are sometimes also caused by an abnormal excitation of the cerebral center of vision.

The sensory part of hallucinations is an actual fact and is as real as any sense impression; the fault of hallucinations lies in the wrong interpretation which is superadded by the mind. Therefore, it has been rightly remarked, it is wrong to speak of sense illusions, for in these so-called sense illusions the senses remain reliable, and it is the mind which errs. Sense illusions are instances of such circumstances as are apt to mislead our judgment, but they are really mental mistakes. They are in the domain of sense perception what in the realm of our intellectual activity is called error,—a failure to attain the truth.

The field of hallucinations is wide but we need not enter into further details. We will only say that dreams are natural occurrences, and we may call them hallucinations experienced in sleep or in any subconscious state in which

the normal waking consciousness is temporarily obliterated. The sensory experience of dreams is as real or at least may be as real as the sense impressions of a normal life, and a scientifically educated man knows them to be dreams. But if a nervous patient or the untrained Indian assumes dreams to be realities, he falls into an error, and then his dreams—especially if they occur in a half awake state of mind which sometimes may happen—become hallucinations.

UNIVERSALS AND THEIR CORRELATES.

Thus we see that the foundations of truth are laid by nature herself in accordance with natural law and with the same precision as that which originates in a machine by mechanical necessity. This mechanical necessity is possible only on the supposition that the world is law-ordained, that the beams of light are such and always such, that the same causes under the same conditions always produce the same results, and that this world is a world of uniformities. not a sporadic chaos. If the world were a sporadic chaos, mind could not have originated even in its most primitive In fact mind is nothing but the systematic beginning. upbuilding of the lawdom (Gesetzmässigkeit) that prevails in the world, and we may say that this lawdom is the ultimate basis of truth; it is the condition which makes truth possible.

Facts appear to be chaotic. Not one is exactly like any other. All the various facts that appear in existence present a kaleidoscopic irregularity which in itself appears to be a hopelessly confused tangle. If mind did not originate, the world would remain a meaningless play of blind forces. But the very origin of mind proves that law rules in the world of facts, and all these innumerable items of material existence and this display of unlimited forces is

subject to rule, which makes it possible to formulate all occurrences into general formulas.

There has been much discussion in the history of philosophy about universals, and two contradictory views have been taken of this much mooted subject. There are on the one side thinkers who see in universals the only true reality, the true being or ŏντως ὄν, and on the other side observers of nature who look upon them as mere generalizations which have no true existence and have been invented merely for the purpose of classifying the real things. Both views are right, but both are one-sided, and much depends upon the meaning of the word "real." If it means "thingish," as the word implies, universals are nonentities, for they are not things, nor objects, nor concrete material bodies, they cannot be touched by hands or perceived by any one of the senses.

If concrete actuality of existence is the meaning of "real" we must absolutely grant that universals do not possess reality. From this standpoint the nominalists speak of universals as flatus vocis, as words, and more modern followers of this line of thought treat them as devices for thinking the realities of life. Materially considered universals are non-existent. They are products of the scientist's imagination and neither telescopes nor microscopes, no chemist's crucible nor physicist's scales will ever discover the slightest trace of the actual existence of universals, natural laws, formulas, Platonic Ideas, or anything that belongs to that class.

Now let us consider the opposite view. Does the nominalist school or any one of their type really mean to say that universals are mere *flatus vocis*, mere generalizations, mere contrivances to think the world more easily? Many men of this type actually say so, but do they truly mean it? Would they really be prepared to say that universals possess no objective meaning, that there is nothing corre-

sponding to them in the actual world? We have granted that no actual things, no material entities correspond to They are not divinities presiding over certain departments of nature as represented in the mythology of the religions of the past, nor are they metaphysical essences which somehow mysteriously underlie the phenomena of nature. Nevertheless there is no one who would be prepared to deny that there are certain somethings corresponding to them in the actual world, and that these somethings are the very factors which shape the world. These somethings are not of a material nature, nor are they energies; they are of a purely formal nature, they are relations, shapes, arrangements of parts in one way or another. Yet these purely formal arrangements are the essential conditions of the world of material actuality which determine new formations, and so we cannot say that in every respect they are nonentities.

It is obvious that reality or thingishness and actuality, which means that the material things act, that they do something, that they move about, that there is an active play of forces summarized under the term of energy, are not the whole of existence. There is some additional feature which is non-material and has nothing to do with energy. It is the shape, the interrelation, the form, the direction, the arrangement in which either forces or material particles are combined, and this interrelational something is the true factor that moulds the world and is the reason why this enormous congeries of atoms is not a chaos but a law-ordained cosmos.

We must not overlook the fact that in addition to form there is another non-material element ensouling the world, and this is that indescribable something which develops into human consciousness. It is feeling, the peculiar characteristic of which appears in awareness. For reasons into which we need not enter here, we assume that the whole world is aglow with a potentiality of feeling, which in a philosophical term we may call subjectivity. Subjectivity emerges from purely physical conditions and finally develops in the course of a long evolution into the thinking subject. But even this psychic element of subjectivity would have remained forever a scintillating chaos of subconscious feelings if its elements had not been arranged into an orderly whole according to the laws of pure form. It is the orderly interrelation of elementary subjectivity which in a nervous system makes feeling possible; it is further the proper classification of feelings of the same form which renders feelings representative; and finally it produces reason in the natural course of the evolution of mentality.

The significance of interrelations, of the mode or arrangement, of form, has been strangely overlooked in philosophy, while it has produced in minds of a mystic turn fantastic views as to the nature of spirit, soul and God. Opponents of mysticism have always been inclined to deny the existence of anything spiritual. They try to do without believing in spirit, soul, or God, and certainly they are right in denying the mythology attached to these notions. Nevertheless the facts remain, and the facts which produce these notions are explicable by the significance of relations and forms, and though the purely formal laws as laws have no objective existence, there are purely formal relations which are of utmost importance, and though they are not real in the literal sense of reality, though they are not thingish, they are not for that reason negligible quantities, for they are the most essential feature of all existence. In fact all comprehension, all cognition, all intellectual activity becomes possible only through them. When we speak of reality and actuality, we refer merely to statements of fact. These names—reality and actuality, in other words, matter and energy—contain nothing that can be

understood or would become in any way an object of comprehension. All comprehension consists in tracing transformations of matter or the changes of the forms of energy. Matter and energy simply represent the "that" of existence, not the why or the wherefore.

Accordingly we come to the conclusion that there are objective correlates of our subjective thoughts, of universals, of the laws of nature, and also of the unities of parts which combine into things. Though they are neither concrete objects nor metaphysical essences, they possess an objective significance. They are traceable in the uniformities of nature and the laws in which we summarize these uniformities are true and reliable descriptions of definite features of the constitution of the world. We call these descriptions, these laws of nature, these generalized statements of fact, truths, and the instinctive reverence which men at large have for these truths is well grounded.

THE ONENESS OF ALL TRUTHS.

Experience has taught us to look upon all truths as one great system of more or less general uniformities. which are co-, sub- and super-ordinated in such a way that all of them complement one another and that the more general truths comprise and thereby explain the more particular ones; while the latter are specifications of the former. At any rate we expect that no two truths shall contradict one another. They form contrasts but never come in conflict with each other. The more they stand in contrast the more they are supplementary. This leads to the assumption of the unison, the harmoniousness, the consistency, of all truths. To state the case from the opposite point of view, we assume a priori that there cannot be any contradiction in truth, and so we try to harmonize all contrasts that might occur in the field of our observation.

The a priori assumption of the unity of all truth which

finally abuts in the theory of the oneness and consistency of all existence, called monism, is as a principle of thinking ultimately based in the systematic unity of our mind. The human mind has been built up during the course of its development as a collection of uniformities and these uniformities have classified themselves in proper order according to their sameness, similarity and kinship, so that the whole constitutes a system, and this system represents the prototype of logic. The rules of logic have been deduced from it, and in this sense the human mind is predestined to produce in its further development certain ideas which such philosophers as Leibnitz call "innate."

The human mind has reached that point of mental development in which a sentient being can designate by name the several co-, sub- and superordinated classes and become conscious of their interrelation. The animal mind cannot do so and yet it acts instinctively as if it were possessed of logic. The reason is that its composite memory images are logically arranged and operate like a living machine in a perfectly logical order. Through the instrumentality of language this interrelation can be objectified in terms of abstract thought and presented in systematic form. This system of interrelations becomes a conscious faculty of thought, called reason, which is used as a method for an orderly arrangement of ideas. In its highest perfection the application of this method is called science.

Reason enables man to see in every single occurrence an instance of a general rule, and if general rules describe real uniformities, if they possess correlates in the objective world, we call them truths.

We understand now that the domain of truth and the realm of the mind are coextensive, and mind is practically nothing but the embodiment of the most common truths of the world order, the logic of which in its systematized form we call reason.

We will here forestall a common error frequently committed by beginners and would-be philosophers, which is this, that the most general truths ought to contain the key to all the riddles of the world. In a certain sense this is true enough because an important part of explanation consists in subsuming a certain set of experiences under its proper caption, but all explanations presuppose also a knowledge of the reason why in specific cases a general rule will produce specific results. The power of generalization is the first development of mentality, the power of discrimination is its more subtle and also more difficult correlate. Those who praise a man for his power of generalization, forget that the savage, as well as the superficial investigator, is great in generalizing all things, but that he is weak in making the necessary discriminations. In fact, wrong generalizations are a common source of many errors, and no scientist can attain distinction unless he is keen in discrimination.

Truths are discovered, they are not invented. Though truths belong to the mind and exist only in the mind in the thinking subject, they have an objective significance and describe conditions which obtain somewhere or somehow independent of the mind.

When we say truths are discovered we mean that they cannot be different, and it is not in our power to shape them as we please. They are predetermined and this again implies that in some form or other they exist as potentialities. At the same time the truths which are formulas representing laws of nature are potent factors of reality, and these prototypes of our truths we will call verities. While the verities in their totality as the sum total of the determinants of the world order correspond to God the Creator or God the Father in the Christian doctrine of the Trinity, a perfect system of all the truths would correspond to God the Son, truths being incarnations of the verities. In addition

to the contrast between verities and truths, there is a middle ground composed of those ideas which tend to set the world in harmony with the cosmic order and these are called ideals. These ideals in so far as they pursue the right tendency represent the third person of the Trinity, the Holy Ghost.

Truths are subjective statements, but the reason why they are truths and deserve this high name is their agreement with their objective correlates, and it is noteworthy that these objective correlates are not concrete things but features of things, relations, proportions of interdependence, and other items or events determined by definite causes such as can be subsumed under general formulas. These objective correlates of truth are not concrete things, nor divinities, nor metaphysical essences; the formulas are mere generalizations, and what corresponds to them are generalities of existence which however are not nonentities. They are not material, not concrete, they are interrelations and thus belong to the domain of pure forms. A comprehension of them transforms sentient creatures from the state of brute animals into rational beings, and the objective counterparts, though mere interrelations of the material universe constitute the factors which determine its development and mould the inert mass of material existence into that grand law-ordained cosmos as which we comprehend the universe.

We call the formulas which correctly describe the uniformities that obtain in the universe, truths, and the same term is sometimes also applied to their objective correlates; but in order to distinguish the two we propose to call the latter "verities."

Pragmatism denies the existence of verities. It does not believe in consistency and repudiates the unity of truth. It knows only truths in the plural and these truths have

no objective significance; they are shifting and without stability.

The better we know the uniformities of nature, of social interrelations and of all the phases of life, the more profoundly conversant do we become with the constitution of the universe, or in other words, the more we know of truth the farther does our soul extend and the deeper does it fathom the world. Truths are the subjective reflection of the verities that sustain the universe. The more we know of truth, the higher shall we rise in the course of evolution, the better adapted shall we be to the conditions of life, the more powerful shall we become, the higher shall be our dignity and our worth, and the nearer shall we be unto God,—for what is God but that systematic unison of all the correlates of truth? God is the oneness of all the verities of existence.

In the same way as uniformities are not mere subjective notions, not mere names, but designate definite conditions in the objective world, the things which we meet with in experience are not mere conglomerations of parts. True things, by which we here mean objects of experience which are rightly conceived as unities are not arbitrarily so named and are not of a purely subjective nature. The unity of the thing in our conception corresponds to a unity of its parts in the objective world. It is true that what we call things are bundles of sensations, and we can analyze things into their constituent parts, but the bond of union is of deep significance. An engine is not the sum total of its parts, but the arrangement of its parts in such an interrelation that it will do work, and so we must grant that combinations, groupings, forms, interrelations produce definite and actual effects.

And what is the test that an aggregate of parts constitutes a true unity, a thing worthy of the name? A true thing must not be a mere addition of its parts, not a mere

summation of its elements, not a mechanical mixture of its ingredients, but a combination into a systematic whole which possesses an individuality of its own; and the test is that a thing which is not a mere quantitative aggregate but constitutes a higher configuration into something new is qualitatively different from its parts.

To look upon formations, the relational factors, or the purely formal aspect of things as nonentities, because they are not material items is a misconception of the paramount significance of form. We not only grant, we even insist most emphatically that there are no "things-in-themselves," no unknown or unknowable metaphysical magnitudes behind the world of experience, but for all that we recognize the objective significance of things, the efficiency of formations, of natural laws, of uniformities, and also the importance of the idea of unity, the highest realizations of which are found in organisms, plants, animals and above all in human personalities.

CONCLUSION.

Truth has been on trial. The very backbone of truth, its consistency, the unison of all truths, has been doubted and even denied. The belief in the stability of truth, in its persistence and eternality has been denounced as a superstition.

So far truth has guided us safely from the beginning of mentality; it has endowed man with reason, it has created the sciences, inspired the inventor's imagination and is still leading mankind onward on the path of progress, but it has grown old-fashioned, and the new generation has become tired of it. The old truth is the living water which nourishes, sustains and quickens every fiber of our mental constitution, but this generation is thirsty for innovations. They are sick of the monotony of a truth that is true to itself; they hanker for a truth that is variegated,

fickle, multi-significant. So they leave this venerable ideal and look upon it as an idol. It no longer fits into the program of the "new thought" movement, and pragmatism replaces it by a more elastic kind of truth which can change with the fashions and makes it possible that we need no longer trouble about inconsistencies; for what is true to one need no longer be true to others, and the truth of to-day may be the real now, and yet it may become the error of to-morrow. The new conception of truth flatly contradicts the old rigorous and inconvenient notion according to which no two truths can be contradictory. The pluralistic truth is more accommodating, for it lets all contradictions pass and dispenses with the exacting demands of the old ideal of consistency.

This new truth conception is a fad that has its day but will pass by, for truth, the old time-worn and time-honored ideal of truth as being one and eternal, will sooner or later assert itself again. We cannot live without truth, and the new truth is a pseudo-truth that cannot help us. Those who resent truth's sternness and stability prefer to conceive truth as an errant light which points in one direction to-day and in another to-morrow. This truth is a will-o'-thewisp which does not throw light on the path of progress but entices its followers to wend their way into the quagmire of opinions and opinionated subjectivism.

In the meantime the truth continues to encompass us, for truly all our mental life lives by the grace of truth, and in it every creature that thinks, lives and moves and has its being.

Truth, most wonderful presence in the life of man, thou encompassest our every throb of thought. Thou art God incarnate in our soul. Without thee spirituality would never have risen into being, the light of cognition would not shine, and chaotic darkness would prevail. Without

thee this world would be a congeries of dull matter and a play of blind forces void of meaning and void of purpose.

How ineffably great art thou, O Truth, and yet thou hidest thyself in things small. The senses can not find thee, for thou art not made of matter, nor dost thou consist of force. Thou residest in the meaning of fleeting sensations, and thy significance is a mere relation, a description of the uniformities of nature. And yet thou alone possessest dignity, thou alone art worthy to be called divine, and thou art the son of that All-One whom thou revealest, that One in All who sways motes and stars and moulds the destinies of all the worlds.

Thou needest no shrines and no altars and thou demandest no doxologies. There is no worship that pleaseth thee, except the worship without ritual, a surrender of error, of falsehood, of lies. He is thy true devotee who receives thee in his soul and invites thy presence to bless him.

The ideal of truth may remain neglected or misunderstood for some time, but its light will not be darkened forever. We need not fear for truth, because truth will take care of itself. The cause of truth is God's cause, for truth reflects and reveals the eternal, and the eternal is God.

EDITOR.